such as a minimum or a maximum, of opposite direction than the first increase or decrease. The temporal occurrence of the substantial extreme value with respect to the step function is substantially in the range of the given data rate.--

In The Abstract

Please amend the Abstract as follows:

A filter for injecting data dependent jitter and level noise into a digital data signal with a given data rate reacts on a step function with a step response showing after a first increase or decrease a substantial extreme value, such as a minimum or a maximum, of opposite direction than the first increase or decrease. The temporal occurrence of the substantial extreme value with respect to the step function is substantially in the range of the given data rate.

In The Claims

Please amend the claims as follows:

1. (Amended) A filter for injecting data dependent jitter and level noise into a digital data signal with a given data rate comprising:

circuitry for reacting on a step function with a step response showing after a first increase or decrease a substantial extreme value of opposite direction than the first increase or decrease, whereby the temporal occurrence of the substantial extreme value with respect to the step function is substantially in the range of the given data rate.

2. (Amended) The filter of claim 1, wherein the filter is of at least second order.

3. (Amended) The filter of claim 2, wherein the filter comprises a resistive element with resistance value of R_2, an inductive element with an inductivity value of L_1, and a capacitive element with capacitance value of C_1.

4. (Amended) The filter of claim 3, wherein the resistive value of R_2 and/or the capacitive value of C_1 can be varied.

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5. (Amended) The filter of claim 3, wherein the resistive element, the inductive element, and the capacitive element are coupled as a series or a parallel resonance circuit

6. (Amended) The filter of claim 2 comprising a resistive element and at least two elements of capacitive and/or inductive behavior.

7. (Amended) The filter of claim 2, wherein both zeros of the second order filter are located on the unit circle, and both zeros are closer to the imaginary axis than the poles or the poles are located on the real axis.

8. (Amended) A jitter injection filter for injecting data dependent and level noise into a digital data signal with a given data rate comprising:

circuitry for reacting on an increasing step function with a step response showing at least one substantial minimum after a first increase, whereby the temporal occurrence of the at least one substantial minimum from the step function is substantially in the range of the given data rate.

9. (Amended) Use of a filter according to claim 1 for injecting data dependent and level noise into a digital data signal with a given data rate.

10. (Amended) A method for injecting data dependent jitter and level noise into a digital data signal with a given data rate comprising:

reacting on a step function with a step response showing after a first increase or decrease a substantial extreme value of opposite direction than the first increase or decrease, whereby the temporal occurrence of the substantial extreme value with respect to the step function is substantially in the range of the given data rate.

11. (Amended) A method for injecting data dependent jitter and level noise into a digital data signal with a given data rate, the method comprising:

applying the digital data signal to a filter reacting on a step function with a step response showing after a first increase or decrease a substantial extreme value of opposite direction than the first increase or decrease, and

adjusting the filter so that the temporal occurrence of the substantial extreme value with respect to the step function is substantially in the range of the given data rate.

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12. (Amended) A software program or product stored on a data carrier, for executing a method for injecting data dependent jitter and level noise into a digital data signal with a given data rate when run on a data processing system, the method comprising:.

applying the digital data signal to a filter reacting on a step function with a step response showing after a first increase or decrease a substantial extreme value of opposite direction than the first increase or decrease, and

adjusting the filter so that the temporal occurrence of the substantial extreme value with respect to the step function is substantially in the range of the given data rate.